

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 10/779,867  
Attorney Docket No.: Q79097

### **REMARKS**

Claims 10-17 are all the claims pending in the Application. By this Amendment, Applicant cancels claims 1-9 without prejudice or disclaimer and amends claim 10 to further clarify the invention. In addition, Applicant adds claims 13-17. Claims 13-17 are clearly supported throughout the specification *e.g.*, *see* pages 7-9 of the specification.

#### **I. Preliminary Matters**

As preliminary matters, the Examiner has initialed and return forms PTO/SB/08 A & B submitted with the Information Disclosure Statements filed on February 18, 2004 and May 13, 2004. The Examiner has also acknowledged the claim to foreign priority and indicated the receipt of the certified copy of the priority documents.

The Examiner, however, failed to indicate acceptance of the drawings. Applicant respectfully requests the Examiner to indicate the acceptance of the drawings in the next patent office communication.

#### **II. Summary of the Office Action**

Claims 1-9 are withdrawn from further consideration as being directed to non-elected species and claims 10-12 are rejected under 35 U.S.C. § 102.

#### **III. Prior Art Rejections**

The Examiner rejected claims 10-12 under 35 U.S.C. § 102(b), as being anticipated by U.S. Publication No. 2002/016690 to Miyazawa et al. (hereinafter "Miyazawa"), claims 10 and 11 are also rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,887,405 to Tohara et al. (hereinafter "Tohara") and claim 10 is also rejected under 35 U.S.C. § 102(e) as

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being anticipated by U.S. Patent No. 6,602,110 to Yi (hereinafter “Yi”). Applicant respectfully traverses these rejections in view of the following comments.

The Examiner contends that Miyazawa, Tohara, and Yi, each suggest each feature of the independent claim 10. These rejections are not supportable for at least the following reasons. Claim 10 is the only independent claim. Claim 10 recites “wherein, while forming the axis-asymmetric aspheric surface, the turning tool moves in the fixed direction without performing a reciprocating motion in an opposite direction.”

In general, the exemplary, non-limiting embodiment of the present invention broadly relates to a method of quickly forming an aspheric-surface with a large undulation. That is, at least one turning tool that is movable in the same direction as the rotating axis of a work and in a direction perpendicular to the rotating axis of the work is provided. Since the turning tool moves at the predetermined feed pitch in a fixed direction, the turning tool cuts the work in a simple helical path in a non-zigzag manner *i.e.*, without reciprocating motion in the other direction perpendicular to the rotational axis of the work. It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned below.

Miyazawa, on the other hand, relates to a method of producing and polishing lenses. In particular, Miyazawa discloses a cutting tool moving from an outer peripheral portion to an inner peripheral portion with various feed pitch patterns (Figs. 7-8; ¶¶ 93 and 94). Miyazawa, however, does not teach or suggest moving the turning tool in a fixed direction while forming an

asymmetrical aspheric surface. On the contrary, Miyazawa only discloses that in the case of cutting a spherical surface or rotation-symmetric aspherical surface, the cutting tool may move in one direction, thereby reducing the chipping (§ 98). Miyazawa, however, fails to teach or suggest moving in a fixed direction while forming asymmetrical aspheric surface, as required by claim 10. Therefore, Miyazawa fails to teach or suggest the unique features of claim 10.

Similarly, Tohara only discloses moving the cutting blade in a combined X and Z directions. However, as depicted in Fig. 1 of Tohara, the cutting blade is moved back and forth in the X direction (Fig. 1; col. 2, line 16 to 33). That is, Tohara fails to teach or suggest moving the cutting blade in one fixed direction without reciprocating motion in an opposite direction.

Moreover, Yi is related to polishing a substrate and has nothing to do with forming an axis-asymmetric aspheric surface of a lens. Indeed, Yi is from an unrelated field of endeavor. Furthermore, Yi discloses moving the polishing tool 24 in a side-by-side manner in the X axis (Fig. 1; col. 4, lines 31 to 43). That is, in Yi, the polishing tool 24 is moved back and forth and not in a fixed direction without reciprocating motion in an opposite direction.

In summary, the deficiencies of the Miyazawa, Tohara, and Yi references fall to the Examiner's burden to show inherent inclusion of the claim elements. Therefore, for all the above reasons, independent claim 10 is patentable. Claims 11 and 12 are patentable at least by virtue of their dependency on claim 10.

#### IV. New Claims

In order to provide more varied protection, Applicant adds claims 13-17. Claims 13-17 are patentable at least by virtue of their dependency on claim 10.


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V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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**23373**

CUSTOMER NUMBER

Date: November 15, 2005

Attorney Docket No.: Q79097